

Explore opportunities in

ENVIRONMENTAL SYSTEMS

AGRICULTURE, FOOD & NATURAL RESOURCES CLUSTER

CAREER AND TECHNICAL EDUCATION

2017

Do you enjoy...

- ▶ Designing water treatment systems
 - ▶ Evaluating environmental impact
 - ▶ Environmental law
 - ▶ Microbiology
 - ▶ Soil Science & Hyrdrology
 - ▶ Hands on work
 - ▶ Ecology
 - ▶ Data analysis & research
 - ▶ Interacting with nature
 - ▶ Independent work

Minnesota employers want you!

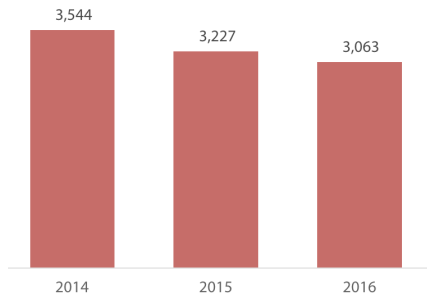
Learn just how far you can **GROW** in these high-demand careers.



Environmental Systems Career Pathway

The environmental service systems career pathway includes occupations involved in improving and preserving water, soil, environmental, or air quality. Pollution control, recycling, waste disposal, and public health issues are the core focus of these occupations. Work includes hazardous waste management, research, and quality control.

Environmental System Jobs Posted Online in Minnesota



Hiring Statistics in Minnesota (2016)

Growth in jobs 2015-2016:	-5% (declining)
Number of employers:	886 employers
Overall outlook:	Declining
Median salary:	\$54,400 / year

Top Occupations

- Environmental Science & Protection Technicians (30%)
- Environmental Engineers (16%)
- Construction Managers (13%)
- Environmental Compliance Inspectors (13%)
- Water & Wastewater Treatment Plant Operators (6%)

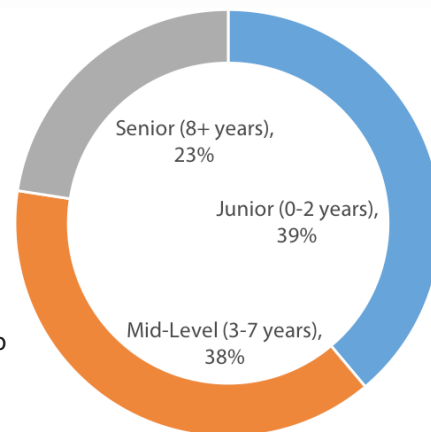
Sample First-Year Job Titles in this Pathway

- Commercial Project Manager, Ebert Construction
- Staff Environmental Geologist, Envir Resources Management Group
- Water Treatment Plant Operator, City of Granite Falls

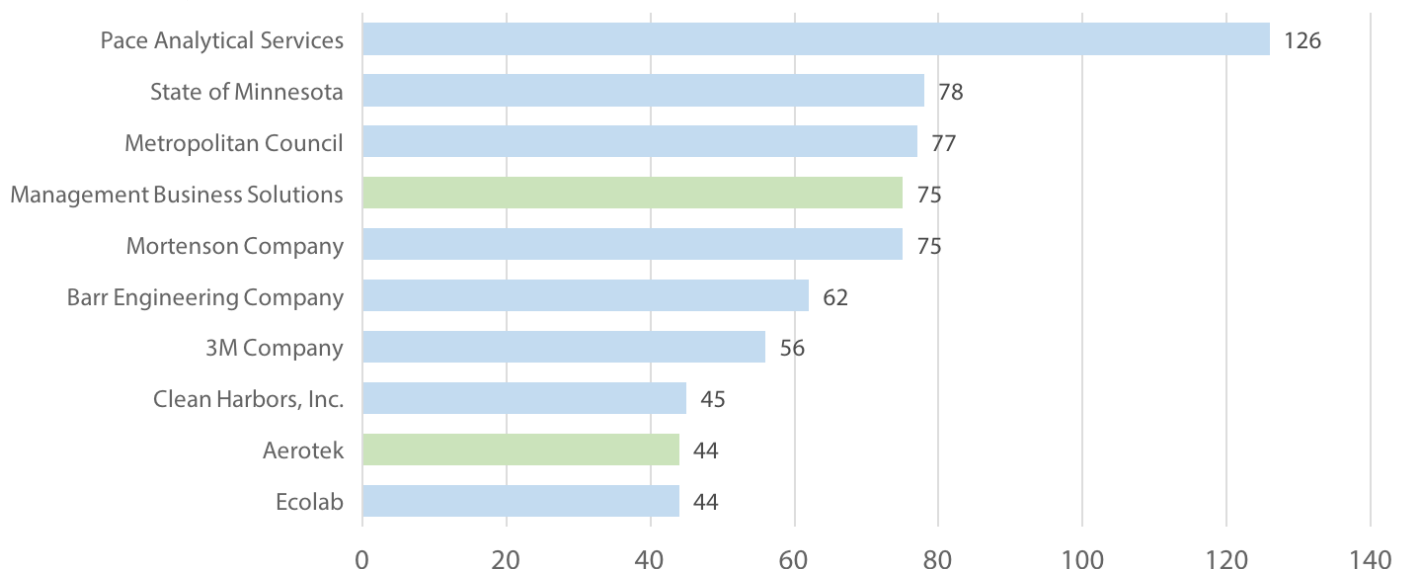
Sample Senior Job Titles in this Pathway

- Wastewater Engineer, City of Rochester
- Senior Air Quality Scientist - Petroleum Industry, Barr Engineering
- Highway Department Environmental Technician, Metropolitan Council

Experience Level Sought



Top Employers who Recruited in 2016



Top 5 Certifications

1. Occupational Safety & Health Administration (OSHA) ↗
2. HAZMAT ↗
3. Hazardous Waste Operation and Emergency Response
4. Class D Driver's License ↗
5. Professional Engineer

Top 10 Hard Skills

1. Quality Assurance/Control
2. Water Treatment
3. Environmental Consulting ↗
4. AutoCAD
5. Instrumentation ↗
6. Scheduling Software ↗
7. Quality Systems ↗
8. Project Management Software ↗
9. Preventive Maintenance ↗
10. Technical Support ↗

Top 10 Soft Skills

1. Communication Skills ↗ ▲
2. Project Management
3. Construction Management ↗
4. Detail-Oriented ↗
5. Problem Solving ↗ ▲
6. Teamwork ▲
7. Integrity ▲
8. Work Independently ↗
9. Management Experience ↗
10. Self-Motivated ↗

↗ Rising Skills (+5% or more from 2015 to 2016)

▲ Matches to CTE Foundation Knowledge/Skill

	Occupation	Job Titles	Total Job Count 2016	Change from 2015	Median Salary	Most Common Education Level Requirement
Environmental Systems	Environmental Science and Protection Technicians	Biological Science Technician, Lab Analyst I, Plasma Lab Technician, Restoration Division Field Technician, Environmental Geologist, Pilot Plant Technician, Field Analyst, Processing Tech	921	3%	\$41,568	Bachelor's Degree
	Environmental Engineers	Wastewater Engineer, Environmental Specialist, Watershed Planner, Water Quality Specialist, Air Quality Engineer - Petroleum Industry Focus, Associate Engineer - Industrial Waste	488	-8%	\$74,590	Bachelor's Degree
	Construction Managers	Construction Manager, Superintendent, Project Manager	405	-6%	\$78,885	Bachelor's Degree
	Environmental Compliance Inspectors	Highway Department Environmental Technician, Solid Waste Environmental Specialist - Planning and Zoning, Compliance Analyst, Transmission Compliance Specialist, Product Regulatory Compliance Manager	384	-30%	\$56,450	Bachelor's Degree
	Water and Wastewater Treatment Plant and System Operators	Water/Wastewater Operator, Water Treatment Plant Operator	185	-6%	\$42,257	GED/High School
	Occupational Health and Safety Specialists	Safety and Infection Control Specialist, Safety Specialist, Health and Safety Specialist, Mine Safety and Health Inspector, Safety, Health, and Environmental Specialist	126	20% ↗	\$70,914	GED/High School
	Refuse and Recyclable Material Collectors	Residential Helper, Refuse Route Driver, Garbage and Recyclables Collector, Recycling Processor	124	3%	\$27,664	GED/High School
	Pest Control Workers	Commercial Pest Control Technician, Utility Technician, Service Route Technician	121	3%	\$32,036	GED/High School
	Environmental Engineering Technicians	Geo-Environmental Technician, Engineering Technician, Flow Meter Technician, Disaster Restoration Technician, Fire and Water Restoration Technician	97	7% ↗	\$34,489	GED/High School
	Urban and Regional Planners	Planner, Assistant Planner, Urban/Land Use Planner, Transportation Planner	51	-44%	\$69,813	Bachelor's Degree
	Recycling and Reclamation Workers	Recycling Sorter, Auto Dismantler, Recycle Zone Worker	44	5% ↗	\$21,568	GED/High School
	Atmospheric, Earth, Marine, and Space Sciences Teachers, Postsecondary	Earth and Live Science Teacher, Hydrology Teacher, Professor of Hydrology	30	30% ↗	\$57,800	Bachelor's Degree
	Hazardous Materials Removal Workers	Material Handler, Wildlife Removal Specialist, Rodent Removal Specialist	29	2800% ↗	\$37,277	Bachelor's Degree
	Atmospheric and Space Scientists	Space Physics Researcher, Meteorologist, Climatologist, Statistical Meteorologist	26	13% ↗	\$82,824	Bachelor's Degree
	Occupational Health and Safety Technicians	Ground Support Technician, Safety Technician, Health and Safety Technician, Shred Technician	13	0%	\$39,938	GED/High School
	Forestry and Conservation Science Teachers, Postsecondary	Assistant Professor in Natural Resources and Wildlife Management, Education Specialist	7	0%	\$55,974	Bachelor's Degree
	Recycling Coordinators	Recycling Coordinator	6	0%	\$42,100	GED/High School
Refrigeration Mechanics and Installers	Commercial Refrigeration Technician, Compressor Room Mechanic - Ammonia Refrigeration	5	25% ↗	\$45,600	Associate Level	

↗ Rising Jobs (+5% or more from 2015 to 2016)

☀️ Bright Future Jobs (DEED-identified)

🌿 Green Jobs (DEED-identified)

Data collected from online job postings between 2013 and 2016 from CEB TalentNeuron Recruit in January 2017 (www.wantedanalytics.com). Report developed by RealTime Talent February 2017 with the support of AgCentric, the Southern Minnesota Center for Agriculture, GreenSeam, AgriGrowth, the Minnesota Department of Agriculture, Career and Technical Education Consortium Leaders, and faculty from Minnesota State colleges and universities across the state.

Environmental Systems Career Pathway

A collaboration of Minnesota State Colleges, Universities, and Industry

Environmental Systems Occupations (continued)

Occupation	Job Titles	Total Job Count 2016	Change from 2015	Median Salary	Most Common Education Level Requirement
Biofuels Processing Technicians	Ethanol Plant Process Operator, Oil/Biofuels Operator	2	0%	N/A	N/A
Hydroelectric Plant Technicians	Hydroelectric Plant Technician	1	100%	\$57,000	N/A
Climate Change Analysts	Climate Analyst, Climate Scientist	0	0%	N/A	N/A
Geophysical Data Technicians	Data Technician, Geophysical Technician	0	0%	N/A	N/A
Biomass Plant Technicians	Biomass Technician	0	0%	N/A	N/A
Methane/Landfill Gas Generation System Technicians	Gas Generation System Technician, Methane Technician	0	0%	N/A	N/A
Hydroelectric Production Managers	Hydroelectric Production Manager, Hydroelectric Plant Manager	0	0%	N/A	N/A

About RealTime Talent

RealTime Talent is a collaboration between public agencies, private industry, higher education, and workforce developers. We are focused on helping decision-makers better align our workforce with our growing economy. Since August 2015, we have trained more than 1,000 leaders across Minnesota to use real-time job posting data to help find solutions to our state's greatest workforce challenges. We are proud to be considered a "hub" for data innovation and exploration. Our four main areas of work for FY2017 include:

- Identify and evaluate new tools which bring efficiency to the "education to employment / re-employment" process
- Foster data use innovation through access to new data, development of reports and templates, and engaging users in best practices for comparing multiple data sources
- Provide customized, customer-centered research and reports upon request, each designed to support local or industry needs
- Provide training and technical assistance to ensure professionals across Minnesota have the capacity to use and share data and other resources.

RealTime Talent provides customized research and data analysis services to employers, non-profits, workforce centers, chambers of commerce, educators, and administrators to maximize learning from new data sources. Products include industry fact sheets, occupational snapshots, employer engagement strategizing, custom surveys, and job market analytics utilizing the real-time data tool TalentNeuron Recruit among other unique LMI data sources. Industry research has focused in healthcare, information technology, agriculture, construction, transportation and manufacturing.

Prepared By

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Based on Agriculture, Food and Natural Resources
Career Pathways from Minnesota State CTE

